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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.       | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------------|------------------|
| 10/774,390   | 02/10/2004  | Daniel S. Yaich      | YAIC3001/BEU              | 9759             |
| 23364  | 7590        | 02/01/2006           |                           |                  |
| BACON & THOMAS, PLLC<br>625 SLATERS LANE<br>FOURTH FLOOR<br>ALEXANDRIA, VA 22314 |             |                      | EXAMINER<br>HAYES, BRET C |                  |
|  |             |                      | ART UNIT<br>3641          | PAPER NUMBER     |

DATE MAILED: 02/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                        |                     |  |
|------------------------------|------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                              | 10/774,390             | YAICH, DANIEL S.    |  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                              | Bret C. Hayes          | 3641                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 January 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3 and 11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent No. 4,939,996 to Dinkha et al. (*Dinkha*).

3. Re – claim 1, Dinkha discloses the claimed invention including a method of cannelluring a frangible bullet 10, comprising the steps of: positioning, in a cutting machine, such as a lathe as set forth at col. 13, lines 24 – 26, for example, and as seen in Figs. 1 and 2, for example, a frangible bullet made of a compressed powdered metal material, as set forth at col. 13, lines 4 – 24, for example; rotating\* the bullet around a longitudinal axis; applying\* a cutting tool having a flat surface with \*\*beveled edges to the bullet in order to machine cut a cannellure. \*Regarding the steps and tool faces required to lathe a work piece, please refer to the office actions mailed 16 DEC 04 and 12 AUG 05 and the inherency set forth therein. Regarding the cutting tool having a flat surface with beveled edges, please refer to the action mailed 16 DEC 04 and the inherency set forth therein.

4. Re – claim 2, Dinkha further discloses wherein the powder material is a lead-free powder material, see col. 12, line 62 – col. 13, line 35, for example. Note there is no mention of lead.

*Claim Rejections - 35 USC § 103*

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
6. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dinkha.
7. Dinkha teaches the invention substantially as claimed except for the beveled edges being at a 45-degree angle relatively to a flat base of the cannellure. It would have been obvious to one having ordinary skill in the art at the time the invention was made to include 45 degree beveled edges in the cannellure, since there is no invention in merely changing the shape or form of an article without changing its function except in a design patent. *Eskimo Pie Corp. v. Levous et al.*, 3 USPQ 23. Firstly, there is no unexpected result from including 45 degree beveled edges relatively to the flat base of the cannellure: the function of the cannellure does not change. Secondly, if the frangible bullet disclosed by Dinkha can withstand an apparently 90-degree edged cutting tool, it can certainly stand up to being cut with a less than 90-degree beveled edges cutting tool as the stresses and strains on the work piece would be less and less with a decrease in the sharp edges of the cutting tool, which is why most cutting tools are made with at least the barest minimum of a radius instead of a 90 degree corner.
8. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dinkha as applied above in view of US Patent No. 6,536,352 to Nadkarni et al. (*Nadkarni*), previously cited.
9. Dinkha discloses the invention substantially as claimed except for the powdered metal material comprises a copper tin powder mixture. Nadkarni teaches at col. 5, lines 7 – 14, that

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copper-tin powders are well known in the art for the purpose of aiding in the frangibility of a bullet, as set forth at col. 5, lines 26 – 30, for example. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the bullet of Dinkha to that of a copper-tin powder as taught by Nadkarni in order to aid the frangibility of a bullet.

### ***Response to Arguments***

10. Applicant's arguments filed 23 JAN 06 have been fully considered but they are not persuasive.

11. The disclosure and alleged teaching away of Dinkha notwithstanding, the fact of the matter is that Dinkha does indeed disclose compressed powdered metal material when stating that zirconium, aluminum, and magnesium, et al. can be used because these elements appear in the period table under the "Metals" heading for just that reason – they are metals. Further, the term 'ceramic' normally includes oxides, which include aluminum and zirconium as key ingredients. Therefore, the recitation of a compressed powdered 'metal' material cannot overcome the Dinkha reference as argued because those ingredients are metals, whether or not that is Dinkha's intention.

### ***Conclusion***

Any inquiry concerning this communication should be directed to Bret Hayes at telephone number (571) 272 – 6902 or email address [bret.hayes@uspto.gov](mailto:bret.hayes@uspto.gov). The examiner can normally be reached Monday through Thursday from 5:30 am to 4:00 pm, Eastern Standard Time.

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The Central FAX Number is **571-273-8300**.

If attempts to contact the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Carone, can be reached at (571) 272 – 6873.

bh

27-Jan-06

Michael Carone  
SPE 3641